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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/727,527 | 12/05/2003 | Takuma Kobayashi | 03500.017758. | 7336 |

5514 7590 04/25/2006

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NEW YORK, NY 10112

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| EXAMINER |
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BUTLER, DENNIS

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| ART UNIT | PAPER NUMBER |
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2115

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/727,527 | KOBAYASHI ET AL. | |
| | Examiner | Art Unit | |
| | Dennis M. Butler | 2115 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/23/04</u> . | 6) <input type="checkbox"/> Other: _____ |

1. This action is in response to the application filed on December 5, 2003. Claims 1-9 are pending.

2. The abstract of the disclosure is objected to because it is too long and because it is unclear for the same reasons described below in connection to the 35 U.S.C. 112, second paragraph rejection. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the claim is indefinite and unclear as to its meaning.

The preamble is unclear because it is directed to controlling a signal generator using a microcomputer having a timer. However, the preamble also recites that

the signal generator outputs a control signal for controlling a timing of turning on/off a semiconductor device by means of the timer. If the timer is in the microcomputer, why does the signal generator output the control signal and why is the control signal output to a semiconductor device when the signal generator is the device being controlled? The relationship between the signal generator and the semiconductor device is unclear. In addition, no control signal is recited in the body of the claim. Therefore, the relationship between the preamble and the body of the claim is unclear and indefinite. The phrase "the setting step" lacks proper antecedent basis because no setting step was previously recited. The phrase "and the calculating step of determining a set value for the timer" is unclear as to its meaning and its relationship to the claim and the set value being calculated. The phrase "the setting step is performed before the calculating step" contradicts the previous setting step which recites that the set value is calculated in a pre-interrupting step (calculated before the setting step).

Regarding claim 2, the phrases "the setting step" and "the calculating step" lack proper antecedent basis because it is unclear whether they refer to previous steps or additional setting and calculating steps. The setting steps recited in claim 2 are unclear as to their relationship to the setting step recited in claim 1. Particularly as to whether they are part of the interrupting step or are part of a post-interrupting step.

Regarding claim 3, the preamble is unclear because it is directed to controlling a signal generator using a microcomputer having a timer. However,

the preamble also recites that the signal generator outputs a control signal for controlling a timing of turning on/off a semiconductor device by means of the timer. If the timer is in the microcomputer, why does the signal generator output the control signal and why is the control signal output to a semiconductor device when the signal generator is the device being controlled? The relationship between the signal generator and the semiconductor device is unclear. In addition, no control signal is recited in the body of the claim. Therefore, the relationship between the preamble and the body of the claim is unclear and indefinite. The phrases "the calculating step" and "the setting step" lack proper antecedent basis because no calculating or setting steps were previously recited. The calculating step is vague and indefinite as to what is being calculated. The step is unclear whether a turning on, a turning off or both a turning on and a turning off timing is being calculated. In addition, the step is unclear as to the relationship between the timing, the first semiconductor device and the second semiconductor device. The claim fails to point out whether these devices are turned on, turned off or turned on and off.

Regarding claim 4, the phrase "the semiconductor device" lacks proper antecedent basis with respect to claim 3. In addition, no control signal or controlling step is recited in the body of the claim. Therefore, the relationship between the preamble and the body of the claim is unclear and indefinite.

Claims 2 and 4-9 are rejected because they incorporate the deficiencies of preceding claims.

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 6 and 7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are directed to functional descriptive material that is a program or a set of programs not embodied in a computer readable medium. Applicant's method/computer program is not tangible. An abstract idea of a data structure became capable of producing a useful result when it was fixed in a tangible medium that enabled its functionality to be realized. In re Warmerdam, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994). The claim language would be statutory if applicant amended the claims to recite that the program or set of programs are embodied in a computer readable medium (tangible).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis M. Butler whose telephone number is 571-272-3663. The fax number for this unit is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Dennis M. Butler

Dennis M. Butler
Primary Examiner
Art Unit 2115